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World Intellectual Property Organization
PCT Division
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Amendment of the claims under Article 19(1) (Rule 46)

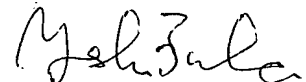
International Application No. : PCT/JP2004/004556
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Dear Sir

The Applicant, who received the International Search Report relating to the above identified International Application transmitted on 30.03.04, hereby files amendment under Article 19(1) as in the attached sheet.

Attached is a replacement sheet pages 18 to 22-1. Thus, claims 1, 9, 12 and 14 are amended and claims 2, 3, 4, 5, 7, 8, 10, 11 and 13 are retained unchanged.

Very truly yours,



Yoshito Fukushima

Attachment :

(1) Amendment under Article 19(1)

6 sheets

CLAIMS

1. (Amended) A data reproduction apparatus for reproducing data recorded in a recording medium, and capable
5 of being connected via an interface bus to a video display apparatus that operates according to software, comprising:

a transmitter that transmits video data and audio data read from the recording medium, using a first area and a second area, respectively, to said video display apparatus via said
10 interface bus; and

a controller that controls said transmitter to transmit, at the time of a software update for said video display apparatus, update software read from the recording medium to said video display apparatus via said interface bus,
15 using a third area for transmission of additional data that is different from said first and second areas, while indicating the software update to said video display apparatus, wherein

said interface bus includes a data line that transmits
20 the video data, the audio data, and the additional data, a clock line that transmits a clock signal, and a control line that transmits a control signal,

said first area is a video period of the video data, and said second and third areas are present in a blanking interval
25 of the video data, and

said transmitter outputs a clock signal to said clock line while transmitting, in synchronization with the clock signal, the update software via the data line using said third area.

5

2. The data reproduction apparatus according to claim 1, wherein

information related to the software update is further recorded in the recording medium, and

10 said controller controls, at the time of the software update for said video display apparatus, said transmitter to transmit the related information read from the recording medium to said video display apparatus via said interface bus, using said first area and/or said second area.

15

3. The data reproduction apparatus according to claim 2, wherein

said related information includes audio data, and

20 said controller controls said transmitter, at the time of the software update for said video display apparatus, to transmit the audio data in said related information read from the recording medium to said video display apparatus via said interface bus, using said second area,.

4. The data reproduction apparatus according to claim
2, wherein

said related information includes video data, and
said controller controls said transmitter, at the time
5 of the software update for said video display apparatus, to
transmit the video data in said related information read from
the recording medium to said video display apparatus via said
interface bus, using said first area.

10 5. The data reproduction apparatus according to claim
2, wherein

said related information includes operational guide
information representing an operational procedure for the
software update.

15

6. (Canceled)

7. The data reproduction apparatus according to claim
1, wherein

20 said update software includes identification
information for identifying an object whose software should
be updated, and

said controller indicates a software update to said
video display apparatus based on said identification
25 information.

8. The data reproduction apparatus according to claim 7, further comprising a storage device that stores software for said controller, wherein

5 said controller indicates a software update to said video display apparatus when said identification information represents said video display apparatus, and updates the software stored in said storage device, using the update software read from the recording medium, when said
10 identification information represents a software update for said controller.

9. (Amended) A video display apparatus capable of being connected to a data reproduction apparatus via an interface
15 bus, wherein

 said interface bus includes a data line that transmits video data, audio data, and additional data, a clock line that transmits a clock signal, and a control line that transmits a control signal, and

20 said first area is a video period of the video data, and said second and third areas are present in a blanking interval of the video data,

 said video display apparatus comprising:

 a receiver that receives the video data and the audio
25 data transmitted by said data reproduction apparatus via said

interface bus, using said first area and said second area,
respectively, and receives update software transmitted in
synchronization with the clock signal output to said clock
line by said data reproduction apparatus, using said third
5 area other than said first and second areas;

an audio output unit that outputs a sound based on the
audio data received by said receiver;

a video display unit that displays an image based on the
video data received by said receiver;

10 a processor that controls said video display unit and
said audio output unit; and

a storage that stores software for said processor,
wherein

said processor updates, upon reception of the update
15 software transmitted via said interface bus using said third
area by said receiver, and indication of a software update
by said data reproduction apparatus, the software stored in
said storage using the update software received by said
receiver.

20

10. The video display apparatus according to claim 9,
wherein

said processor controls said receiver to receive
information related to the software update that is
25 transmitted via said interface bus using said first area

and/or said second area, and causes said video display unit to display an image and said audio output unit to output a sound, based on the related information received by said receiver.

5

11. The video display apparatus according to claim 9, further comprising:

an expansion function unit that implements an expansion function;

10 another processor that controls said expansion function unit; and

another storage that stores software for said processor for said expansion function, wherein

15 said processor transmits, upon indication of a software update for said other processor by said data reproduction apparatus, the update software received by said receiver to said other processor while indicating the software update for said other processor, and

20 said other processor updates the software stored in said other storage according to the indication by said processor, using the update software transmitted from said processor.

12. (Amended) A software updating system comprising:

25 a video display apparatus that operates according to software; and

a data reproduction apparatus for reproducing data recorded in a recording medium, and capable of being connected to said video display apparatus via an interface bus, wherein said data reproduction apparatus includes:

5 a transmitter that transmits video data and the audio data read from the recording medium, using a first area and a second area, respectively, to said video display apparatus via said interface bus; and

a controller that controls said transmitter to
10 transmit, at the time of a software update for said video display apparatus, update software read from the recording medium to said video display apparatus via said interface bus, using a third area for transmission of additional data other than said first and second areas, while indicating the
15 software update to said video display apparatus, wherein

said interface bus includes a data line that transmits the video data, the audio data, and the additional data, a clock line that transmits a clock signal, and a control line that transmits a control signal,

20 said first area is a video period of the video data, and said second and third areas are present in a blanking interval of the video data, and

said transmitter outputs a clock signal to said clock line while transmitting, in synchronization with the clock

signal, the update software via the data line using said third area, wherein

said video display apparatus comprises:

5 a receiver that receives the video data and audio data transmitted by said data reproduction apparatus via said interface bus using said first area and said second area, respectively;

an audio output unit that outputs a sound based on the audio data received by said receiver;

10 a video display unit that displays an image based on the video data received by said receiver;

a processor that controls said video display unit and said audio output unit; and

15 a storage that stores software for said processor, wherein

said processor updates, upon reception of the update software by said receiver that is transmitted via said interface bus using the third area for transmission of the additional data, and indication of the software update by said data reproduction apparatus, the software stored in said storage using the update software received by said receiver.

20

13. The software updating system according to claim 12, wherein

said video display apparatus includes a television receiver.

14. (Amended) A software updating method for updating
5 software for a video display apparatus using a data reproduction apparatus for reproducing data recorded in a recording medium, and capable of being connected to said video display apparatus via an interface bus, comprising the steps of:

10 transmitting, at the time of a software update for said video display apparatus, update software read by said data reproduction apparatus from the recording medium to said video display apparatus via said interface bus, using a third area for transmission of additional data other than a first
15 area for transmission of video data and a second area for transmission of audio data;

indicating the software update to said video display apparatus by said data reproduction apparatus;

receiving by said video display apparatus, upon
20 indication of the software update by said data reproduction apparatus to said video display apparatus, the update software transmitted via said interface bus using said third area; and

updating the software for said video display apparatus
25 using said received update software, wherein

said interface bus includes a data line that transmits the video data, the audio data, and the additional data, a clock line that transmits a clock signal, and a control line that transmits a control signal,

5 said first area is a video period of the video data, and said second and third areas are present in a blanking interval of the video data, and

 said step of transmitting includes the step of outputting the clock signal to said clock line while
10 transmitting, in synchronization with the clock signal, the update software via the data line using said third area.